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Agricultural Engineering.

Agricultural engineer - technician or engineer. By Hard E. Pinches. Agricultural Engineering. v. 17, no. 4. April, 1936. p. 163-164. Discussion of agricultural structures. Fundamental approach that needs to be made is to start out by separating, temporarily, structures from farm and from field production. There need to be carried on several thorough and far-reaching functional studies of structures to penetrate through tradition and custom. There is, of course, much that is sound and reasonable behind contemporary building practices, but there are also many impediments from earlier thinking or conditions. There is need for more controlled studies (1) to discover scientific bases for ventilation, lighting, optimum temperatures and humidities, and comfort limits (consider wide variation between premises on which some of our standard systems of dairy barn ventilation are set up; (2) to discover fundamental size and shape relations (as dairy barn width for two rows of stanchions is well known); (3) to discover relations of labor efficiency to building layout. There is need for more emphasis on adaptability and unit sizes and shapes.

Agriculture.

Better way of doing it. By L.R. Neel. Southern Agriculturist. v. 66, no. 4. April, 1936. p. 7, 19. If farming is to be most profitable and satisfactory, search must be made for better ways of doing dozens of things that must be performed on farm. New tools and new methods are being used by other farmers who produce for same markets we do, so to keep up with procession we must steadily be bringing into use new machines and devices, and learning new ways.

Financing agriculture in 1935. Washington, D.C., Farm Credit Administration, 1936. 17p.

Increase in number of farms shown by new census. Farm Implement News. v. 57, no. 11. May 21, 1936. p. 19. There are now 6,812,350 farms in the United States. 1930 census placed number at 6,288,650. Table shows number of farms in each State according to 1935 census, and for comparative purposes figures from 1930 census are given.

Industry looks to the farm. By L. F. Livingston. Farm Journal. v. 60, no. 6. June, 1936. p. 22, 30.

Agriculture. (Cont'd)

Industry looks to the farm. By L.F. Livingston. Farm Journal. v. 60, no. 6. June, 1936. p. 22, 30.

Air Conditioning.

Air conditioning. Architectural Forum. v. 63, no. 6. December, 1935. p. 577, 579.

Air pollution and cleaning. Refrigerating Engineering. v. 31, no. 5. May, 1936. p. 284-286. On the theory and use of filters.

Condensed list of sources of information on air conditioning. Washington, D.C. U.S. Bureau of Foreign and Domestic Commerce, 1936. 16p.

Distribution and control in air conditioning. By Newton C.Ebaugh. Ice & Refrigeration. v. 90, no. 6. June, 1936. p. 442-446. Complete air conditioning requires that air be under definite control. Requirements and fundamentals of air distribution. Control of various systems.

Drier air for summer comfort. By V.L. Sherman. American Builder and Building Age. v. 57, no. 8. August, 1935. p. 34-36. New mechanical equipment for the home can solve the problem of summer air conditioning.

Power requirements for air conditioning. Heating, Piping & Air Conditioning. v. 8, no. 6. June, 1936. p. 328.

Psychrometric chart with barometric pressure as a variable. By J. S. Chandler. Heating and Ventilating. v. 33, no. 3. March 1936. p. 36-39. With the general chart described here the density of the air-vapor mixture can be readily determined for standard as well as other pressures.

Rational application procedure in selecting air conditioning equipment. Part II. By F.H. Faust and F.O. Urban. Refrigerating Engineering. v. 31, no. 5. May, 1936. p. 299-303. Rational selection of air conditioning equipment is based on meeting application requirements with lowest possible total annual cost. Factors involved are relation of air quantity and heat transfer surface to cooling medium temperature, relation of cooling medium temperature to capacity of refrigeration equipment, relation of air quantity to air distribution system, and relation of quantity and temperature of treated air to air motion and temperature distribution within conditioned space. All of these factors must be studied carefully in arriving at final economic selection. Furthermore, design and control of equipment must be determined on basis of maintaining humidity and temperature within permissible limits for varying conditions of operation which affect both total cooling load and ratio of latent and sensible components.

Air Conditioning. (Cont'd)

Solving the four types of process air conditioning problems. By William Goodman. Heating, Piping, and Air Conditioning. v. 8, no. 6. June, 1936. p. 323-325. Part 1. All air conditioning problems fall into one of four main divisions, depending upon whether the sensible and latent heat are being subtracted from, or added to, the space being conditioned. Problems typical of each division are discussed here and solutions by the psychrometric chart explained.

Alcohol Fuel.

Alcohol threatens oil profits. By Thomas Calvert McClary. Magazine of Wall Street. v. 58, no. 2. May 9, 1936. p. 88-89, 124.

First power alcohol plant. By A.C. Forrester. Western Irrigation. v. 18, no. 9. June, 1936. p. 10-11.

Kansas to make fuel alcohol. Prairie Farmer. v. 108, no. 7. March 28, 1936. p. 5, 11. Plant now being equipped at Atchison. Project will be practical test of dreams of those who would solve corn belt's surplus crop problem not by taking acres out of cultivation but by turning surplus grain into motor fuel. It is sponsored by Chemical Foundation, and will use new patented process. Plan is to use it as 10% blend with gasoline.

Associations.

American Association for the advancement of Science. Science. v. 83, no. 2159. May 15, 1936. p. 447-456. Preliminary announcement of the Rochester meeting.

Proceeding of the eleventh annual meeting of the National Joint Committee on fertilizer application, held at Chicago, Illinois, December 4, 1935. Washington, D.C., National Fertilizer Association, 1936. 104 p. multigraphed.

Program 30th Annual Meeting of the American Society of Agricultural Engineers, Stanley Hotel, Estes Park, Colorado, June 22 to 25, 1936. Agricultural Engineering, v. 17, no. 5. May, 1936. p. 217-218.

Barns.

Barns I have seen. By S.A. Witzel. Hoard's Dairyman. v. 81, no.6. March 25, 1936. p. 148, 167. Observations after a windstorm.

Firesafe barn. By F. A. Lyman. Hoard's Dairyman. v. 81, no.6. March 25, 1936. p. 150.

How to build a wind-proof gothic barn. By A.W. Holt. American Builder & Building Age. v. 57, no. 8. August, 1935. p. 46-49,71.

New ideas for barns. By R. M. Loper. Nebraska Farmer. v. 78, no. 10. May 9, 1936. p. 7. Shed-type provide more space at lower cost.

Building Construction.

How to get a higher F H.A rating on insured loans. Quality construction required. By Joseph B. Mason. American Builder and Building Age. v. 57, no. 10. p. 32-33. Rating of mortgage risk on house is done on basis of five major factors as follows: 1. Value of house itself. 2. Desirability of neighborhood. 3. Relation of house to its neighborhood. 4. Rating of borrower. 5. Type of mortgage loan.

Indexes of small-house building costs. Federal Home Loan Bank Review. v. 2, no. 9. June, 1936. p. 336-339. Table shows total costs and cubic-foot costs of building the same standard house in representative cities in March and June, 1936.

Prefabricated or just ready-cut? American Builder and Building Age. v. 57, no. 8. August, 1935. p. 20-21, 62.

Prefabricated units for the home. By J. Andre Fouilhoux. Architectural Forum. v. 63, no. 6. December, 1935. p. 544-576. Description does not include such material as fiber boards, plywood panels, plaster boards, cement and asbestos boards, which may become prefabricated units if methods of building is adapted to their stock size, or if they are factory cut to dimensions required by prefabricated system. It must be realized that there are many other systems of prefabricated units not mentioned here. Number of names listed in preparing this article was really staggering, but many systems have already been abandoned, many are only in drafting room stage, and many are only ideas of inventors without any knowledge of requirements of building material. In order to succeed, prefabrication must prove its worth and stability beyond reasonable doubt, and show that risk which is always present in something new and untried is more than offset by better results or savings which will be obtained.

Relative cost of material and labor in PWA building construction. By Herman B. Byer. American Builder and Building Age. v. 57, no. 8. August, 1935. p. 58.

Columbia River Basin.

Regional planning. Part 1.- Pacific Northwest. Washington, D. C. National Resources Committee, 1936. 192p. Deals with immediate and urgent problems in Columbia Basin and particularly with policies and organization which should be provided for planning construction, and operation of certain public works in that area.

Cotton and Cotton Ginning.

Brief discussion of gin saw tooth form and shape. By Charles A. Bennett. Cotton Ginners' Journal. v. 7, no. 1. October, 1935. p. 3-4, 14.

Care and maintenance of gins at the close of the season. By Charles A. Bennett. Cotton Digest. v. 8, no. 25. March 28, 1936. p. 4-5.

Cotton and Cotton Ginning. (Cont'd)

Improved method of delinting cotton seed. Southern Agriculturist. v. 66, no. 4. April, 1936. p. 17.

Movement to improve cotton ginning in the United States. By F.L. Gerdes and Charles A. Bennett. Cotton and Cotton Oil Press. v. 37, no. 12. March 21, 1936. p. 10-11.

Practical gains result from cotton ginning studies. Cotton and Cotton Oil Press. v. 37, no. 15. April 11, 1936. p. 5.

Ribless and multi-cylinder gins. By Charles A. Bennett. Cotton Ginners' Journal. v. 7, no. 5. February, 1936. p. 3-5.

Seed cotton handling and ginning practices in relation to quality of lint. By F.L. Gerdes. Cotton Ginners' Journal. v. 7, no. 9. June, 1936. p. 5-6, 11-12, 14-15, 18-19.

Sharpening gin saws for better efficiency and quality ginning. By Charles A. Bennett and F.L. Gerdes. Cotton Ginners' Journal. v. 7, no. 7. April, 1936. p. 7-8, 20, 29.

Crop Production.

Crop production costs rising. By Harry G.Davis. Farm Machinery and Equipment. no. 1828. April 15, 1936. p. 10. Figures show that use of efficient methods and equipment minimize production costs. Many farmers beating Government estimates.

Crop production costs rising. By Harry G. Davis. Better Farm Equipment and Methods. v. 8, nos. 8-9. April-May, 1936. p. 4-5. Figures show that use of efficient methods and equipment minimize production costs. Many farmers beating Government estimates.

Dairy Farm Equipment.

Arranging dairy stable. Hoard's Dairyman. v. 81, no. 6. March 25, 1936. p. 160-161.

Last word in dairy barns and milking parlors. By A.B. Bryan. Farm Machinery and Equipment. No. 1828. April 15, 1936. p. 12.

Dams.

Boulder dam is completed. Pacific Rural Press. v. 131, no. 11. March 14, 1936. p. 353.

Measuring bed rock action under Tygart dam. By J.E. Deignan. Engineering News-Record. v. 116, no. 2. May 21, 1936. p. 731. Elastic wire strain meters registering at nine depths from 30 to 170 feet will be read for deformations of foundation rock.

Diesel Engines.

Diesel engine for heating. By Joseph F. Kern. Heating and Ventilating. v. 33, no. 4. April, 1936. p. 23-26. One suggested method of operation is as follows: internal combustion engine is direct connected to generator and heat in exhaust gases and cooling water together with some of electricity is used to heat building. Remaining electricity could be used for lighting and cooking. Attempt to get clear idea of method of operation and to point out some of more obvious characteristics of plan

Diesel power cost in cotton gins. By Orville Adams. Cotton and Cotton Oil Press. v. 37, no. 16. p. 3-5. April 18, 1936. Tabulation of reports direct from ginners.

How the Diesel stands today. By Wesley B. Moore. Refrigerating Engineering. v. 31, no. 5. May, 1936. p. 287-288.

Plowing with a Diesel. Breeder's Gazette. v. 101, no. 4. April 1936. p. 12-13. Will gain much popularity with farmers as economical source of power on farms large enough to justify investment and will be used quite extensively as soon as they can be manufactured in sufficient quantities to cause some reduction in their cost.

Drainage.

Current land-drainage research. Engineering News-Record. v. 116, no. 20. May 14, 1936. p. 698. Leading object of attention by U.S. Department of Agriculture. Cooperative investigations with Minnesota Department of Conservation and University of Minnesota are being continued to determine factors that influence permanency of underdrains, because of failures of material used as result of chemical and frost action. At hydraulic laboratory of University of Iowa cooperative investigations are under way relating to flow of water around bends. Investigations are planned to develop theory of hydraulic jump on sloping floors, as such information would be of value in design of spillways and structures for discharging lateral drains into main outlet channels. In Florida studies are being made to determine optimum depth of drainage for different crops in peat and muck soils, and means and cost of maintaining these depths. In southern Louisiana investigation is under way to determine most advantageous depth and spacing of drains for sugarcane land, and effect of drainage upon yield of cane and sugar. Runoff investigations are being continued on two small watersheds in Iowa. In northern Minnesota, studies are being made to determine relation of groundwater table to drainage.

Drainage investigations by the United States Department of Agriculture. by Louis A. Jones. Washington, D.C., U.S. Bureau of Agricultural Engineering, 1936. 16p. Mimeographed.

Drainage. (Cont'd)

Mole drainage demonstrations, 1924-1932. By J.H. Blackaby. Journal of Ministry of Agriculture. v. 42, no. 12. March, 1936. p. 1244-1255. Benefits of drainage which were observed, are briefly, improvement on character and composition of herbage, improvement in hay crop, extension of grazing season, and possibility of outwintering stock.

Electric Service, Rural

Costs and construction of farm lines. By Frank R. Innes. Electrical World. v. 106, no. 9. February 29, 1936. p. 67-74. Facts on costs of rural lines and on their construction. Data from 105 Utilities in 37 States on 194 lines built and proposed are analyzed to show trends of practice. Particular discussion on the "Why" of costs with comments from the field.

Private service cheaper two rural "co-ops" find. Electrical World. v. 106, no. 14. April 11, 1936. p. 63.

Rural line economy. By H.E. Hoadley. Electrical World. v. 106, no. 17. April 25, 1936. p. 46-49. Thorough study of conductor properties affords basis for building good rural electrification lines cheaply by using longest feasible span.

Serving the farmer. Electrical World. v. 106, no. 21. May 23, 1936. p. 102-103. Edison Electric Institute reports some 160,000 farms now reached by power lines that do not use electricity service. Two matter-of-fact problems: 1. Where is money coming from to get service to these farms? 2. When service was brought to line side of meter, would and could customer buy and use equipment necessary to justify line, and, as well, pay monthly bills? Fact that 50,000 farms were connected to public utility company lines during 1935 is proof that industry has approached a solution to first problem.

Electric Wiring.

Extension wiring system. Electrical World. v. 106, no. 13. March 28, 1936. p. 31. Rubber raceway cemented to building wall provides a flexible, easily installed domestic extension system.

Electricity in the Home.

Electric equipment in the home; its care and repair. By Albert V. Krewatch. College Park, Md., 1936. 23p. University of Maryland. Extension Service. Bulletin no. 76.

Increasing domestic use. Electrical World. v. 106, no. 21. May 23, 1936. p. 100-101.

Electricity on the Farm.

Appliances desired by rural prospects. Electrical World. v. 106, no. 10. March 14, 1936. p. 93. Study of major appliances disired by prospects for rural service in Massachusetts revealed that the radio, water pump and washing machine were most coveted devices. This study, which was part of a survey of rural electrification in Massachusetts conducted by F.E.R.A. of that State, was based on replies to inquiries as to appliances prospects would purchase and install during first year of service on extensions for which ratio of capital cost to revenue was 15 to 1.

Concerning electricity on the farm. By J. Romness. Farm Implement News. v. 57, no. 12. June 4, 1936. p. 26. Table gives power requirements for various farm jobs. Approximate energy consumption for the various farm jobs. Energy consumption of various household appliances.

Electrical problems on the farm. By D.J. Whitney. California Cultivator. v. 83, no. 9. April 25, 1936. p. 326-327. Wasting power. Problem of the small farmer.

Emancipation from drudgery. By James R. Moore. Nation's Agriculture. v. 11, no. 9. May, 1936. p. 4, 14.

Flip-a-switch farming. By Jim Marshall. Country Home. v. 60, no.5. May, 1936. p. 14-15.

Inescapable facts on rural electrification: Editorial. Electrical World. v. 106, no. 9. February 29, 1936. p. 55. Electrification of rural America is a job for business, not for politics, however seductive may be its promises. Farm service holds out very real and very large commercial possibilities to whole electrical industry. These possibilities can be transformed into solid and worth-while accomplishments by reaction with enlightened selfishness of good business judgment. It will be a shame indeed if possibilities of electricity for raising standards of rural life are perverted and prevented from full realization by forcing them into devious ways of politics.

Pacific Coast leads farm electrification. Idaho Farmer. v. 54, no.8. April 16, 1936. p. 10. Pacific coast shows more progress along this line than any other section of the country. Total number of Pacific northwest farms served electrically increased 14 per cent in two years, as compared with 11 per cent for all America.

Eorsion Control.

Dust bowl. By Ben Hibbs. Country Gentleman. v. 106, no. 3. March, 1936. p. 5-6, 83-87.

Erosion control in terrace outlets. By J.C. Wooley. Agricultural Engineering. v. 17, no. 5. May, 1936. p. 208-209.

Erosion Control. (Cont'd)

Erosion control project, carried on two years in western Wisconsin. Wisconsin Agriculturist and Farmer. v. 63, no. 8. April 11, 1936. p. 3, 12.

Floods and dust storms children of the same folly. By Paul B. Sears. Science News Letter. v. 29,no. 781. March 28, 1936. p. 197. Destruction of the living sod and its spongy layer of top soil lets dust blow and water run away.

Hydraulic studies of erosion control. By J.T. McAlister. Soil Conservation. v. 1, no. 10. May, 1936. p. 10-11. Tests which have been completed or are in progress include: 1. Determination of proper discharge coefficient of rectangular masonry notches for vertical overfalls. 2. Development of information concerning stabilizing soils with portland cement for use in erosion control structures. 3. Determination of proper designs of dams, baffles, flumes, and high velocity channels and studies of permissible velocities for different types of vegetative treatments.

Lost - good hill land farm! Disappeared down the river after rain. By L. I. Rummell. Ohio Farmer. v. 177, no. 9. April 25, 1936. p. 10.

Menace of erosion. By Theodore M. Knappen. Magazine of Wall Street. v. 58, no. 1. April 25, 1936. p. 27-28, 60. Conquering forces of hostile nature, loosed by our own carelessness are already so far advanced that unless they are stopped in their tracks within twenty years, the United States has not more than a hundred years of existence as a first-rate power.

Present status of soil erosion control program. By H.B. Row. Implement and Tractor. v. 51, no. 11. May 30, 1936. p. 14.

Save Southwest Virginia Soil. By D.T. Painter. Southern Planter. v. 97, no. 4. April, 1936. p. 7, 36-37.

Strip crops go with contoured rows. Farmer-Stockman. v. 49, no.8. April 15, 1936. p. 5, 11.

Too much dust! By Ralph G. Bray. Nation's Agriculture. v. 11, no. 8. May, 1936. p. 2, 12-13. What's responsible for these dust storms? What can be done to prevent them?

Up and down, or around? By Carlyle Hodgkin. Nebraska Farmer. v. 78, no. 10. p. 3. Contour farming keeps the water on the land.

Evaporation.

Evaporation from free water surface. By M. Lurie and N. Michailoff. Industrial and Engineering Chemistry. v. 28, no. 3. March, 1936. p. 345-349.

Evaporation. (Cont'd)

Evaporation survey of Ohio. By J.D. Wilson and J.R. Savage. Wooster, Ohio. 1936. 53p. Ohio. Agricultural Experiment Station. Bulletin 564.

Fans, Mechanical.

Automatic control for central fan systems for summer operation. Heating and Ventilating. v. 33, no. 4. April, 1936. p. 54-57. Illustrates some simple control arrangements and suggests how some of these may be grouped to secure combinations approaching those used in operating installations.

Automatic controls for winter central fan system. Heating and Ventilating. v. 33, no. 3. March, 1936. p. 51-54. Diagrams show simple arrangements of the fan.

Farm Buildings and Equipment.

Bull pen construction. Hoard's dairyman. v. 81, no. 6. March 25, 1936. p. 158.

Interest in building increases this spring around Wisconsin. Wisconsin Agriculturist and Farmer. v. 63, no. 9. April 25, 1936. p. 3, 17.

Practical dipping vat. By Newton C. Myers. Southern Agriculturist. v. 66, no. 4. April, 1936. p. 46.

Three types of milk houses. Hoard's Dairyman. v. 81, no. 6. March 25, 1936. p. 165.

Farm Buildings and Equipment.

Binder troubles. By Edward Van Antwerp. Farm & Ranch. v. 55, no.7. April 1, 1936. p. 4.

Demand for haying machines is increasing with acreage. Implement & Tractor. v. 51, no. 11. May 30, 1936. p. 8-9. Probably no period in all history of haying machinery has seen greater improvement than that recorded during last three years. Higher speed and greater efficiency have been built into tractor mowers. Higher speed operation in cutting hay is possible, and especially where tractor is equipped with rubber tires. Rubber tires on drawn mowers where tractors are used afford many advantages.

Design of machine for harvesting Buffalo grass seed. By Frank J. Zink. Agricultural Engineering. v. 17, no. 5. May, 1936. p. 197-198.

Disc harrow. Hoard's Dairyman. v. 81, no. 7. April 10, 1936. p.193. New teeth, that are heavier and harder than those used formerly on this harrow, together with other improvements, have added nearly a third more value to this implement, a committee of prominent agricultural engineers

Farm Machinery & Equipment. (Cont'd)

has ascertained. Additional 40% greater value has been attached to modern spring-tooth harrow, same committee states, in its report on changes in quality values of farm machines. Better material is being used in manufacture, making possible stronger, stiffer frame, and new teeth have also been designed to be more effective in eradication of certain weeds, especially quack or witch grass.

Farm boys like those new cultivators. By E.T. Leavitt. Farm Implement News. v. 57, no. 11. May 21, 1936. p. 26.

Farm equipment production and sales in 1935. Farm Implement News. v. 57, no. 10. May 7, 1936. p. 24-29. Last previous year for which domestic sales figures were shown separately was 1930, in which year the U.S. volume was officially placed at $381,099,124. The official report for 1929, the peak year of the past decade, showed the domestic volume to have been $458,091,248 in that year. No data were gathered by the Bureau of the Census for 1932, 1933, or 1934, but estimates of total volume of domestic and foreign were made for those years by Farm Equipment Institute as follows: 1932, $116,000,000; 1933, $119,000,000; 1934, $130,000,000. Total volume for 1935, as now shown in this latest official report, was $324,415,989.

Farm machinery cost is small. By J.E. Stanford. Southern Agriculturist. v. 66, no. 4. April, 1936. p. 4. Government report shows that farmers' investment in implements and machinery represents less than 5% of total value of all farm property, which includes land, buildings, implements, machinery and livestock. Included in this report is value of many millions of automobiles and trucks owned by farmers. If automobiles and trucks were deducted, farm machinery probably would not comprise more than three and one-half per cent of farm investment, because three and one-half per cent represents investment in implements and machinery of total value of all farm property at each census enumeration from 1850 to 1910.

Farmers approve hay chopping. Implement and Tractor. v. 51, no. 10. May 16, 1936. p. 14-15. Recent survey shows favorable opinions of users. Born to meet needs of western feeders, method is now popular over entire country.

Harvesting negative grass seed. By Guy C. Fuller. Agricultural Engineering. v. 17, no. 5. May, 1936. p.195-197. Advantages of power stripper are as follows: 1. It moves under its own power. 2. It may be transported from one field to another without any adjustment. 3. Height adjustment ranges from 6 inches to 4 feet. 4. It is possible to secure cleaner seed because of flexibility of cylinder and hopper. By pulling down on rope the hopper is raised allowing it to pass over noxious weeds or any other undesirable materials. 5. This adjustment allows machine to be operated upon rough ground. Much of our native seed is harvested in fields where machinery has never been used before. 6. It can be operated by one man. Conclusions: 1. Ordinary farm machinery may be used

Farm Machinery & Equipment. (Cont'd)

for harvesting seed of most native grasses. 2. New power stripper has many advantages over horse-drawn machine, principally because of its flexibility and amount of ground covered. 3. Buffalo grass seed may be secured with vacuum machine. 4. Machines of this design will harvest from 50 to 60 per cent of seed under average conditions, and will not damage pastures. 5. For best results, pastures moderately to heavily grazed must be selected from which to harvest seed. A chain drag used on pastures of this nature will slightly increase amount of seed obtained. 6. Moving pastures will not be feasible because of added expense and lack of available pastures where mowing would be permitted even at rental prices. 7. Efficiency of machine will be determined by density of turf, and how securely seeds are imbedded in soil. 8. Because of demands for buffalo grass seed, amount of money and time involved in perfecting these machines to point of more than 50 per cent efficient has been entirely worth while.'

Haymaking speeds up. Successful Farming. v. 34, no. 6. June, 1936. p. 16, 34-35. Presenting handy machines and workable field methods to move your crop in quickly.

How to make a seed duster. Grain & Feed Journals. v. 76, no. 8. April 22, 1936. p. 328. Materials needed for construction of seed dusting machine have been found to cost from $1.25 to $5.00, with average of $3.50.

Machine for dusting seed grain. Grain & Feed Journal. v. 76, no. 7. April 8, 1936. p. 279. Consists of container that will hold 8 to 10 pounds of copper carbonate or mercuric dust, hopper through which grain being treated can be poured by hand or from spout, augurs that control flow of dust and grain together into mixing cylinder, and mixing cylinder, inside of which is fitted with baffle plates to pick up dust and grain together and drop them through dust laden air on inside of cylinder. Sacking spouts are provided at cylinder outlet. Driven by 1/2 H.P. motor, this machine will effectively treat 100 bushels of grain per hour with disease preventive dusts. Machine is carefully designed, and can be so minutely controlled that mixtures of as little as one-half ounce of mercury dust with a bushel of grain can be accurately and thoroughly made.

Mowing 14 to 30 acres in a day. Kansas Farmer. v. 74, no. 10. May 9, 1936. p. 10. Tandem hook-up saves 29 percent in time and labor.

New corn planters hasten seeding. Farm Machinery and Equipment. no. 1828. April 15, 1936. p. 7. Some sound planting suggestions that dealers may pass on to their local editors.

Row-crop power cultivation. British Sugar Beet Review. v. 9, no. 9. May, 1936. p. 269-272. Generally speaking, row-crop tractor work is superior to horse work, since wheels cause fewer casualties to plant population than do horses' feet, and, as implements pulled are oftener of heavier construction, they run at more even depth.

Farm Mechanical Equipment. (Cont'd)

Small combine does good work. Southern Planter. v. 97, no. 5. May, 1936. p. 16. In report on experimental taste with five-foot harvester, western agricultural college came to following conclusions: All-crop combine will help small operator to cut his harvesting cost even below that of largest operators; also initial investment will be low, thus permitting small operator to own combine.

Specifications of combined harvester-threshers. Farm Implement News. V. 57, no. 11. May 21, 1936. p. 40-41.

Specifications of grain threshers. Farm Implement News. v. 57, no. 11. May 21, 1936. p. 42.

Specifications of silo fillers. Farm Implement News. v. 57, no. 11. May 21, 1936. p. 50.

These figures illustrate how machinery reduces crop production costs. By Harry G. Davis. Implement Record. v. 33, no. 5. May, 1936. p. 14-15.

Tractors, combines and threshers. Farm Machinery and Equipment. no. 1828. April 15, 1936. p. 11. Bureau of Census reports on manufacture and sale in 1935.

Fertilizer Placement.

Another method of fertilizer distribution for potatoes. By G.V. Houghland and G.A. Cumings. American Fertilizer. v. 84, no. 9. May 2, 1936. p. 7-8, 24. General results from first year's studies on Long Island using hill-placement method of fertilizer distribution for potatoes lead naturally to three tentative conclusions: (1) Concentration of fertilizer beside seed piece in 5-inch bands, placed in manner described, appears to be a promising method of distribution, when amount of fertilizer applied is about 1,750 pounds per acre; (2) ton of fertilizer per acre or more may be needed to maintain yields with applications in continuous bands or bands 10 inches long placed at each side of hill; (3) There was evidence of supplying fertilizer concentration too high for best yields when amounts of fertilizer were applied exceeding 1,750 pounds per acre, with distribution in 5-inch bands.

Fertilizer Spreaders.

Spreading manure from sleds saves both time and money. By Donald Joyce Thompson. California Citrograph. v. 21, no. 7. May, 1936. p. 235.

Fireplace.

New gustatory thrill in the backyard barbecue. Brick & Clay Record. v. 88, no. 5. May, 1936. p. 192-196. Use of brick outdoor oven is spreading rapidly, breeding sociability and good appetite. Brick oven is best.

Fires.

Fighting fires before they start. Hoard's Dairyman. v.81, no. 6. March 25, 1936. p. 147.

Stop farm fires! By M. L. Wilson. Southern Agriculturist. v. 66, no. 4. April, 1936. p. 15, 18.

Floods and Flood Control.

Flood control. Engineering News-Record. v. 116, no. 22. May 28, 1936. p. 793. Omnibus flood control bill passed by Senate, and Mississippi river bill approved by the House.

Flood-control policy: Editorial. Engineering News-Record. v. 116, no. 23. June 4, 1936. p. 821. Policy laid down by Senate recognizes that Federal Government has an interest in all floods on navigable rivers and their tributaries, and provides for Federal participation in projects where benefits exceed cost if project is approved by Corps of Engineers (or by Soil Conservation Service, when soil conservation is involved.) These two agencies are to study and report upon project; execution of approved projects is to be carried out by one or both of them, depending upon its character. Projects are to be operated by and at expense of benefited communities, and these communities are to provide land and protect Federal Government against damage suits. Federal Government will give its approval, within defined limits, to interstate compacts for flood control on interstate streams. Too much cannot be expected of this first attempt to define Federal Government's relation to flood control, especially in view of concerted efforts to put all cost of such work on Federal Government.

Measuring Ohio's rivers. By C.U. Youngquist. Engineering Experiment Station News. Ohio State University. v. 8, no. 2. April, 1936. p. 15-16. Ohio River flood of 1936 and the effect of tributaries in Ohio.

Runaway river controlled. By O. J. Todd. Engineering News-Record. v. 116, no. 21. May 21, 1936. When a great dike break threatened to change the course of China's Yellow River last summer, native methods and resources were called on to close the crevasse. Different undertaking was successfully completed a month ago.

Too much water! By E. M. Markham. Nation's Agriculture. v. 11, no. 8. p. 3, 12. Discusses major problems in program of flood control.

Flow of Water.

Resistance of valves and fittings to flow of water. Water Works & Sewerage. v. 83, no. 5. May, 1936. p. 118-120. Table 1. Flow of water through Std. W.I. or steel pipes in fair condition.

Water: Discussion of flows, friction, measurement and power. Water Works & Sewerage. v. 83, no. 5. May, 1936. p. 106-115.

Flumes.

Long flume service. By B. H. Skillings. Engineering News-Record. v. 116, no. 22. May 28, 1936. p. 777-778. High maintenance costs and heavy leakage cause abandonment of a California structure that had given service for 65 years. Replacement made with standard metal flume.

Parshall measuring flume. By Ralph L. Parshall. Fort Collins, Colo., 1936. 84 p. Colorado Agricultural Experiment Station. Bulletin no. 423.

Forage Drying.

Artificial drying of grass. Dairy. v. 48, no. 568. May 9, 1936. p.13. Government and leading industrial firms have made thorough investigation of this new industry, which may revolutionize winter feeding.

Artificial drying of grass and other fodder crops. Rural Electrification and Electro-Farming. v. 11, no. 132. May, 1936. p. 379-381. Small scale drying plants. Heat for drying. Action of hot air. Use of driers. Types of driers. Costs of drying.

Frost Protection.

Orchard heating. A. H. Hoare. Journal of the Ministry of Agriculture. v. 42, no. 12. March, 1936. p. 1218-1220.

Fuels.

Present day Diesel fuels and fuel specifications. By T.M. Robic. Power Plant Engineering. v. 40, no. 6. June, 1936. p. 338-340. Introduction of the high speed engine and new refining methods complicate the Diesel fuel problem.

Recent Nebraska test develops new interest in fuels. Implement & Tractor. v. 51, no. 10. May 16, 1936. p. 16. Data from tests enables trade and its customers to interpret fuel costs in their respective states and communities.

Steam generation by burning wood. By R.E. Summers. Heating and Ventilating. v. 33, no. 4. April, 1936. p. 27-28.

Heat Transmission.

New value of heat transmission coefficients for concrete walls. Heating and Ventilating. v. 33, no. 4. April, 1936. p. 34-36. Based on data and conclusions presented in paper resulting from research sponsored by American Society of Heating and Ventilating Engineers in cooperation with University of Minnesota and Portland Cement Association.

Heating.

Heating. Architectural Forum. v. 63, no. 6. December, 1935. p. 622-626.

Thermal conductivity. By T.H. Ouderkirk. Acrologist. v. 12, no. 5. May, 1936. p. 7-9, 12. Part three.

Hotbeds.

Electrified hotbeds yield pre-season plants. Electrical World. v. 106, no. 19. May 9, 1936. p. 46. Arkansas truck farmer electrifies tenth-of-an-acre hotbeds to compete with early season produce from Rio Grande Valley.

Operating the electric hotbed. By H.A. Pinches. New England Homestead. v. 109, no. 7. March 28, 1936. p. 10. Few points which should be observed to give satisfactory operation. 1. Good thermostat should be used. One can be obtained for about $10. or less, and it will handle up to eight or twelve sashes on 110 volts (depending on the type of thermostat) or 16 to 24 sashes on 220 volts. Whatever make or type of thermostat is used it should be one which has a snap action to avoid burning the contact points, and to avoid radio interference. 2. Be exact in measurement of oil heating cable, especially if it is bought in quantity and cut at home. 3. Place thermostat so that it will not be shaded while sun is shining. 4. Position of thermostat with relation to soil-heating cable may make several degrees difference in temperature. 5. In building hotbed, special attention should be given to getting it tight to prevent air leakage. 6. During short periods of extreme cold weather, do not try to maintain temperature high enough for growth.

Puts speed into hotbed. Idaho Farmer. v. 54, no. 7. April 2, 1936. p. 16. Electric soil heating sets aside Nature's germination rules.

Houses.

E.M. Lurie perfects new steel house., American Builder and Building Age. v. 57, no. 8. August, 1936. p. 50-52. Uses metal lath and cement plaster on light structural frame to win low cost.

Farm dwelling construction. By Fred B. White. Agricultural Engineering. v. 17, no. 5. May, 1936. p. 193-194, 232. Brief description of steel-clad dwelling which was recently built near Birmingham, Alabama, illustrates simplicity of this type of construction.

Homes to fit the farm. By R.M. Loper. Nebraska Farmer. v. 78, no. 11. May 23, 1936. p. 7. Two houses planned especially for rural needs.

Houses on the farm. Hoard's Dairyman. v. 81, no. 6. March 25, 1936. p. 149, 170. How to get the most value from your housing dollar in modernization and comfort.

Purdue tackles the housing problem; builds houses for testing, proposes erection of laboratory in which houses can be subjected to rapid weathering. Heating & Ventilating. v. 33, no. 3. March, 1936. p. 48-49. Purposes are the following: To provide research facilities for homes as a whole more economic in scope than any existing agency in building field. To conduct research and testing on strictly independent basis - functioning always as non-commercial agency - whose

Houses. (Cont'd)

findings may be accepted by all as being entirely free from bias. To conduct all research work with view of issuing reports of findings which are more truly indicative of actual performance of building structures than has generally been true of more limited material-testing in past, and to state results of findings insofar as possible in terms which will be equally understandable to laymen and professional men. To pursue research and testing closely in cooperation with other existing laboratories, and to invite their participation in conduct of test programs where Purdue programs have natural bearing upon specialized programs of other organizations. To give particular attention to organization of research and testing procedure for purpose of aiding in broadening of building codes and regulations, and bettering of standards acceptable to loan agencies. To act as instrument for carrying out definite research projects for industrial concerns or others - either for development of new processes or for verification and testing of new systems of materials. To undertake program of compilation of best, most authoritative and most modern scientific data on tests and performance of building products and structures (from all existing sources) and to promote program of intelligent coordination of all existing testing and research agencies.

Steel frame house. By L.S. Hamaker. Agricultural Engineering. v. 17, no. 5. May, 1936. p. 192. Deals briefly with development of steel frame for residence.

Successful Farming's small home. By H.E. Wichers. Successful Farming. v. 34, no. 6. June, 1936. p. 47-49.

Insulation.

Insulating farm buildings. By A.B. George. Hoard's Dairyman. v. 81, no. 6. March, 1936. p. 150.

Insulation. House & Garden. v. 69, no. 2. February, 1936. p. 53-58.

Insulation. Architectural Forum. v. 63, no. 6. December, 1935. p. 601-603. Types of insulating material.

Practical suggestions on house insulation. By J.D. Hoffman. Heating and Ventilating. v. 33, no. 4. April, 1936. p. 52-53. In ordinary residences there are three locations where insulation may properly be applied: the wall, the attic floor-ceiling, the roof. Under what conditions may each of these locations apply?

Irrigation.

Irrigating sub-tropicals. By Ernest Braunton. Pacific Rural Press. v. 131, no. 11. March 14, 1936. p. 348.

Irrigation in Montana. By Paul T. DeVore. Montana Farmer. v. 23, no. 18. May 15, 1936. p. 3, 31. Upper Yellowstone district is highly developed.

Irrigation of deciduous orchards and vineyards. By F.J. Veihmeyer and A.H. Hendrickson. Pacific Rural Press. v. 131, no. 11. March 14, 1936. p. 334-335

Irrigation. (Cont'd)

Irrigation of sugar beets. By J.E. Coke. Pacific Rural Press. v.106, no. 11. March 14, 1936. p. 349.

Orchard overhead irrigation. Pacific Rural News. v. 131, no. 11. p. 346-347.

Terrace irrigation pays dividends. By E.J. Parkinson. Montana Farmer. v. 23, no. 17. May 1, 1936. p. 6-7, 20.

Lubrication.

Lubricating oil; general information-requirements-and methods of test. Washington, D.C. U.S. Government Printing Office, 1936. 13p.

Miscellaneous.

Acrylic resins. By Harry T. Neher. Industrial & Engineering Chemistry. v. 28, no. 3. March, 1936. p. 267-271. It is apparent from this discussion that acrylic resins show many unique physical, chemical and mechanical properties. In view of practically inexhaustible supply of raw materials, and many and varied uses to which all of these products have been already put, there is every reason to believe that in future we shall see rapid increase in number of fields in which acrylic resins will be used to advantage.

Aerial photography. By B. B. Talley. Mechanical Engineering. v. 58, no. 3. March, 1936. p. 151-156. Discussion of technique of getting good photographs from the air.

Industry, agriculture and population readjustment. By John P. Ferris. Mechanical Engineering. v. 58, no. 4. April, 1936. p. 239-243.

Modern equipment for the drafting room. By Walter W. Clarke. Machinery. v. 42, no. 9. May, 1936. p. 577-579. Fundamentally, drafting-room practice has changed but little in last fifty years, but equipment that was considered adequate few years ago has recently been greatly improved.

New artificial fibre: Lanital. Monthly Bulletin of Agricultural Science and Practice. v. 27, no. 4. April, 1936, p. 149-156. Recent discovery in Italy, and elaboration of process of manufacture of artificial wool from casein has aroused lively interest among circles concerned. It is felt that a brief article on present position of matter would be of service, as defining conditions of working, and possible development of this new industry, which makes use as raw material of product essentially agricultural, viz, milk.

New plastic material - AXF. By S.D. Shinkle, A.E. Brooks and G.H. Cady. Industrial and Engineering Chemistry. v. 28, no. 3. March, 1936. p. 275-280. Properties of plastic make it especially interesting as compounding ingredient for use with natural or synthetic rubber. Resistance to ozone cracking, flexibility, and breaking elongation of oil - and gasoline-resistant and semi-hard rubber stocks containing 15 to 20 parts of sulfur per 100 of rubber may be increased by addition of AXF to

Miscellaneous.

compound. Moderate amount of flexibility and stretch is possessed by hard rubber made from equal weights of rubber and AXF. As compounding material with DuPrene, AXF is superior to practice in several ways. AXF has an excellent plasticizing action both on DuPrene and on ethylele polysulfide plastics known as Thiokol. With latter, its inertness causes it to be preferred to rubber for use in this capacity.

Second Dearborn Chemurgic Council Conference. Utah Farmer. v. 56, no. 19. May 10, 1936. p. 9. Stated purpose of Council is to advance industrial use of farm products through applied science, thus helping to relieve surplus crop situation, creating new industries and aiding in solution of unemployment problem.

Painting.

Tests endorse aluminum priming. By Robert I Wray and Junius D. Edwards. American Builder and Building Age. v. 57, no. 8. August, 1935. p. 54, 56. Study of priming paints on different species of lumber.

Pipes and Piping.

Pipe line friction coefficients. Water Works and Sewerage. v. 83, no. 5. May, 1936. p. 136-138. Summary of the findings of the committee on pipe line friction coefficients.

Table of properties aids piping design. Heating, Piping & Air Conditioning. v. 8, no. 6. June, 1936. p. 328-330.

Plows and Plowing.

Studies on the use of the terracing plow for soil conservation. By Horace J. Harper. Journal of the American Society of Agronomy. v. 28, no.4. April, 1936. p. 301-309. Studies on terracing plow were made to determine its limitations in soil conservation program. It is an inexpensive tool and can easily be operated by power available on average farm. It was found that effective height of terrace ridges could be increased by plowing twice in same furrow for three or four rounds. When riding plow is used, deep narrow furrow slice should be moved toward terrace ridge. Moldboard designed with outer end flattened and bent slightly to rear at point about 22 inches from edge of landside will operate easier along crooked furrows, in soil where sods are frequently encountered, and in soil which tends to stick near end of straight moldboard. Draft of terracing plow is very similar to that of general purpose plow when operating under similar conditions. Plow operating in subsurface soil required about twice as much power as same plow operating in surface soil. When terrace ridges are being constructed with terracing plow, land should be planted to small grain or some other crop which will cover surface of ground and reduce erosion which may occur from breaks in low ridges, unless the ridges can be plowed two or three times during fall or winter in order to increase effective height. When row crops are grown, rows should be planted on a contour and parallel with terrace ridge. Terracing plow was more useful than back-filling plow or an ordinary plow in gully control work where soil is removed from upper edge of bank in order to establish more vigorous growth of vegetation in bottom of ditch.

Ponds.

Farm pond. By W.H. McPheters. Agricultural Engineerinv. v. 17, no.5. May, 1936. p. 211-214. Farm ponds may be divided into several types as follows: 1. Small pond formed along terrace line by using extremely heavy fill. This is simply a catch basin for silt and forms a pond for a short period of time only. 2. Type of pond that can be placed in meadow or pasture to catch terrace water. 3. Another type of farm pond is that built in pasture to furnish stock water, and used also for fishing. 4. Another type of farm pond may be used primarily for irrigation. Important uses of farm pond: 1. Pond is certainly needed in greater portion of country for stock water. 2. Pond as erosion control method has been discussed. 3. Ponds may be made primarily for irrigation. 4. Another use of pond, particularly in West, is to furnish place for tree growth.

Poultry Houses and Equipment.

Poultry house renovation. Hoard's Dairyman. v. 81, no. 6. March 25, 1936. p. 169.

Poultry house slope built for a slope. Successful Farming. v. 34, no. 6. June, 1936. p. 69-70. Gives cross section showing proper construction of poultry house floor built on sloping ground.

Pumps and Pumping.

Pump and carry brigade. By Elsie K. Watson. Pennsylvania Farmer. v. 114, no. 11. May 23, 1936. p. 12, 15, 18.

Some notes on electrically driven centrifugal pumps. By Homer E. Beckwith. Water Works and Sewerage. v. 83, no. 5. May, 1936. p. 127-128.

Reclamation.

Sound reclamation policy. By O.S. Warden. Montana Farmer. v. 23, no. 17. May 1, 1936. p. 6.

Refrigeration.

New refrigeration code. Refrigerating Engineering. v. 31, no. 4. April, 1936. p. 234-235. Minimum construction requirements drawn for ice refrigerators.

Precooling and shipping California asparagus. By W. T. Pentzer and others. Berkeley, Calif., 1936. 45p. California Agricultural Experiment Station. Bulletin no. 600.

Refrigerated storage proves load builder. Electrical World. v. 106, no.10. March 14, 1936. p. 73. New idea initiated from popular demand of Oregon and Washington farmers. Briefly it consists of supplying refrigerated locker space where farmers can store perishable products either for future consumption or for better market price. To correct abuses which might develop from misplaced or misappropriated articles certain areas of building were divided into refrigerator locker rooms and space rented for varying amounts, depending upon size of locker needed. Normal temperatures in lockers range between 5 and 10 deg. F. above zero and provision is made so that defrosting seldom raises temperature higher than 20 degrees above zero.

Refrigeration of oranges in transit from California. By C.W. Mann and William C. Cooper. California Citrograph. v. 21, no. 7. May, 1936. p. 234, 272-273.

Research

New research foundation for thermal engineering. Refrigerating Engineering. v. 31, no. 5. May, 1936. p. 304. To place before public latest findings of modern temperature engineering, Temperature Research Foundation has been established at 80 Broadway, New York, N.Y. by Kelvinator Corporation. Foundation will act as clearing house for authoritative facts and figures on heating, food preparation and preservation, air conditioning in home, office and factory, humidity control and the scientific filtration and circulation of air.

Roofs.

Accuracy and use of tabulated values of coefficient U. Heating and Ventilating. v. 33, no. 3. March, 1936. p. 55-58.

Roofing. Architectural Forum. v. 63, no. 6. December, 1935. p. 604-605.

Water-tight roofs of first importance. Wisconsin Agriculturist and Farmer. v. 63, no. 8. April 11, 1936. p. 23. Life of prepared roofing is determined largely by: (1) Quality of materials. (2) Degree of exposure to weathering agencies (sun, rain, and wind). (3) Condition of sheathing and roof framing, and (4) Frequency of inspection and repairs. Good roll roofing includes following desirable qualities: flet with high tensile strength, low loss in weight of original material when it is subjected to heat at 149 degrees Fahrenheit, and moderate amount of mineral surfacing in form and of sand or slate.

Rubber.

Details reported on new German synthetic rubber. Science News Letter. v. 29, no. 782. April 4, 1936. p. 222. New manufactured rubber, known as Buna, and product of German chemical combine I. G., is quite different from war time German attempts at making rubber substitute. Process for producing Buna, goes back to earlier development of acetylene and converting it into butadiene. Latter is changed by polymerization into three forms of synthetic rubber. Most widely known American synthetic rubber, Duprene, appears to be different type of chemical compound, since essential stage in Duprene's manufacture involves placing of chlorine atoms on large molecule. Substance resulting is known as chloroprene which, on standing few days, turns to stiff, jelly-like substance. Jelly mass can be made into Duprene by merely vulcanizing it for five minutes at 114 degrees Centigrade. Claims for Buna rubber are startling: 30 per cent greater wear in automobile tires made from it is among them. Slower deterioration with age and more resistance to heat are others.

Onward march of rubber. By Norman A. Shepard. Industrial & Engineering Chemistry. v. 28, no. 3. March, 1936. p. 281-286. Latest advances in field of rubber compounding are reviewed and discussed briefly, with special emphasis on vulcanizing agents, acidic compounding ingredients, softeners, organic accelerators, anti-oxidants, and reinforcing powders. Progress in use of rubber as raw material for manufacture of synthetic products is described. New rubber-like materials recently developed as substitutes for, or adjuncts to natural rubber, receive attention, as does reclaimed rubber. Some of newer applications of latex are illustrated, as well as some of more important

Rubber. (Cont'd)

new uses of rubber, and new designs for rubber products.

Snythetic rubber. Planter. v. 17, no. 4. April, 1936. p. 165-166. Discussion of Duprene.

Silos.

Trench silo is cheap and practical. By Jim Langham. Southern Agriculturist. v. 66, no. 4. April, 1936. p. 35.

Silt.

Reservoir silting case. Engineering News-Record. v. 116, no. 20. May 14, 1936. p. 695.

Studies of reservoir silting. By Carl B. Brown. SoilConservation. v. 1, no. 10. May, 1936. p. 1-5, 14. Special research investigations being inaugurated include studies of delta and up-valley sedimentation, and means of permanently fixing this sediment through inexpensive engineering structures and vegetative control; studies of wave erosion on shore lines and methods of its prevention; studies of topographic and geologic conditions favorable to temporary desilting basins adjacent to reservoirs; studies of "tunneling" or underflow of silt-laden water through reservoir, and possible means for utilizing this phenomenon in bypassing silt such as modified dam design; studies of physical and chemical properties of reservoir silt and its value or harm if applied to agricultural lands; and studies of sources of silt with a view to controlling particular source areas which may be furnishing an abnormal ratio of total incoming sediment.

Soil Conservation.

Hillside soil conservation. By Walter W.Weir. Pacific Rural Press. v. 106, no. 11. March 14, 1936. p. 350-351. Check dams alone are not erosion control because they deal with effects of erosion and not the causes, and they must be supplemented with some change in farm management which will result in soil staying in place. Contour cultivation has developed a type of bench terrace peculiar to region. Most important erosion control is that which is done as a means of soil conservation, and not as means of reclaiming areas that have already been eroded.

Soil conservation - Its place in national agricultural policy. Washington, D.C. Agricultural Adjustment Administration, 1936. 27p.

Soil conservation in an improved agriculture. By M.F. Miller. Columbia, Missouri, 1936. 15p. Missouri. Agricultural Experiment Station. Bulletin 362.

Soils.

Subsidence of peat soils in Florida. By B.S. Clayton. Washington, D.C. U.S. Bureau of Agricultural Engineering, 1936. 15p. Mimeographed.

Solar Heating.

Solar heaters cut hot water cost. California Cultivator. v. 83, no. 10. May 9, 1936. p. 363. According to F.A. Brooks, solar heaters on the cold water supply to an automatic hot water heater will reduce costs greatly, bringing them within reach of the average rural householder.

Specifications.

Certification plan. By G.W. Wray. Domestic Commerce. v. 17, no.16. June 10, 1936. p. 352. Analysis of status of preparation and utilization of specifications reveals the fact that many excellent specifications well recognized throughout industry are not widely used because of inability of most purchasers to determine or not commodities delivered correspond to specification requirements. Certification plan as carried out by Division of Codes and Specifications of National Bureau of Standards, consists in compilation and distribution of lists of sources of supply of commodities covered by certain selected Federal Specifications, and Commercial Standards. These lists contain names of firms who have indicated their willingness to certify to purchasers, upon request, that material supplied by them on contracts based on selected specifications and standards does actually comply with requirements and tests thereof and is as guaranteed by them.

Sprays and Spraying Equipment.

Dust fungicide feeders for use with seed-treating equipment. Washington, D.C., U.S. Bureau of Agricultural Engineering. 1936. 3p. Mimeographed.

Surveying.

New survey era. By Philip Kissam. Engineering News-Record. v. 116, no. 20. May 14, 1936. p. 697-698. Survey results have been given a new value by creation of a standard plane coordinate system, which makes it possible to fix the geographic position of every survey by elementary methods.

Terracing.

Results of terracing and contour cultivation. By Harley A. Daniel. Farm & Ranch. v. 55, no. 5. March 1, 1936. p. 1, 7. Yield of tepary bean hay in the southern high plains was considerably increased.

Terrace project planning. By C.L. Hamilton. Agricultural Engineering. v. 17, no. 5. May, 1936. p. 205-208. Material deals only with some of more general engineering considerations necessary in developing field plans for successful terracing project.

Tires.

Power on rubber. By Neil M. Clark. Country Gentleman. v. 106, no. 3. March, 1936. p. 12-13, 92-93.

Rubber tires in the furrows. By Harry G. Davis. Nation's Agriculture. v. 11, no. 8. May, 1936. p. 6, 15. Rubber tires: 1. Save fuel. 2. Make it possible to do more work. 3. Make the tractor easier riding and conserve health. 4. Are easier on the tractor. 5. Give tractor more power. 6. Make it possible to drive tractor on paved roads. 7. Increase life of tractor. 8. Make it possible to pull heavier loads. 9. Make it possible to do more kinds of work. 10. Throw less dust about dirver and machine. 11. Reduce repair bills.

Tires. (Cont'd)

12. Pack soil less than steel wheels. 13. Reduce vibration of tractor. 14. Enable operator to do better work. 15. Do not injure fruit trees or fruit tree roots.

Tractors.

Tractors handle any field job. Kansas Farmer. v. 74, no. 10. May 9, 1936. p. 10.

Tractors on United States farms. Farm Implement News. v. 57, no. 11. May 21, 1936. p. 18. Estimate as of April 1, 1936.

Ventilation.

How much outside air is necessary for ventilation? Heating and Ventilating. v. 33, no. 3. March, 1936. p. 31-35. This article, together with curves and tables, is based on report of experiments made by Prof. C.P. Yaglou, E.C. Riley and D.I. Coggins, of Harvary University, presented at the 42nd annual meeting of the ASHVE, entitled "Ventilation Requirements," a progress report of research sponsored by the American Society of Heating and Ventilating Engineers in cooperation with the School of Public Health at Harvard.

Walls.

Low cost walls can be designed with clay brick. By J.H. Hanson. Brick & Clay Record. v. 88, no. 5. May, 1936. p. 177-179. Full cavity 8 inch wall. 8 inch ribbed wall. Grouted walls. 3 types are described that present cries for economy and insulation, and recent floods and tornadoe, have indicared as necessity.

Lower cost masonry walls for low cost homes. Brick & Clay Record. v. 88, no. 5. May, 1936. p. 185-186. Three types of walls are presented: one using H unit, another reinforced with vertical grooves on the inside, the other the fabricated panel.

Walls and roofs. House & Garden. v. 69, no. 1. p. 44-50. January, 1936.

Water Supply.

Follow the wires. By A.J. Davies. Domestic Engineering. v. 147, no.5. May, 1936. p. 73, 179-180.

Progress of the water plan. By J.H. Currie. Pacific Rural Press. v. 131, no. 11. March 14, 1936. p. 345. Central Valley water plan. Redistribution of water in northern and central California so that southern end of San Joaquin valley where rainfall is low will receive ample water for irrigation, and areas of heavy rainfall in north will be protected from flood damage.

Watersheds.

Detailed working plan for watershed studies in the North Appalachian region, relating to water conservation, flood control, and run-off as influenced by land use and methods of erosion control. By C.E. Ramser and D.B. Krimgold. Washington, D.C., U.S. Soil Conservation Service, 1935. 80 p. Mimeographed.